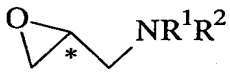
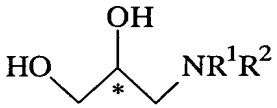
CLAIMS

1. A process for preparing an optically active 1-substituted amino-2,3-epoxypropane represented by formula (6):



(6)

(wherein * represents an asymmetric carbon atom, R^1 and R^2 independently represent a hydrogen atom or a carbamate-, acyl- or aroyl-type amino protecting group, or R^1 and R^2 represent together an imide-type amino protecting group), the process comprising reacting an optically active 1-substituted amino-2,3-propanediol represented by formula (1):



(1)

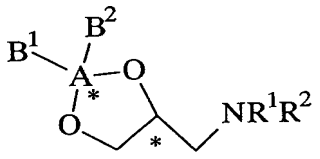
(wherein * represents an asymmetric carbon atom, and R^1 and R^2 represent the same as the above) with a compound represented by formula (2) or (3):

$$R^3C(OR^4)_3 \qquad (2)$$

(wherein R^3 represents a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 10 carbon atoms, or a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, and R^4 represents an alkyl group having 1 to 6 carbon atoms),

$$SOY_2 \quad (3)$$

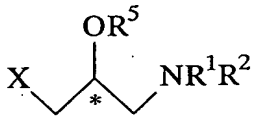
(wherein Y represents a halogen atom or a lower alkoxy group) to produce an optically active compound represented by formula (4):



(4)

[wherein * represents an asymmetric carbon atom or an asymmetric sulfur atom, A represents a carbon atom or a sulfur atom, B^1 represents R^3 (representing the same as the above), and B^2 represents OR^4 (wherein R^4 represents the same as the above) or B^1 and B^2 represent together an oxygen atom, and R^1 and R^2 represent the same as the above]; opening the ring of the compound represented by formula (4) to produce

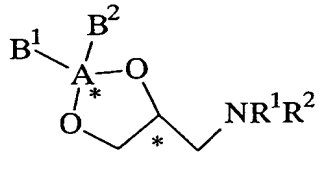
an optically active compound represented by formula (5):



(5)

[wherein * represents an asymmetric carbon atom, X represents a halogen atom, R^5 represents COR^3 (wherein R^3 represents the same as the above) or a hydrogen atom, and R^1 and R^2 represent the same as the above]; and further subjecting the compound represented by formula (5) to ring closure in the presence of a base.

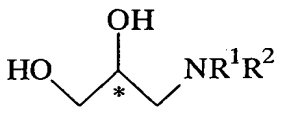
2. A process for preparing an optically active compound represented by formula (4):



(4)

[wherein * represents an asymmetric carbon atom or an asymmetric sulfur atom, A represents a carbon atom or a sulfur atom, B^1 represents R^3 (representing the same as the above), and B^2 represents OR^4 (wherein R^4 represents the same

as the above) or B^1 and B^2 represent together an oxygen atom, and R^1 and R^2 represent the same as the above], the process comprising reacting an optically active 1-substituted amino-2,3-propanediaol represented by formula (1):



(1)

(wherein * represents an asymmetric carbon atom, R^1 and R^2 independently represent a hydrogen atom or a carbamate-, acyl- or aroyl-type amino protecting group, or R^1 and R^2 represent together an imide-type amino protecting group) with a compound represented by formula (2) or (3):

$$R^3C(OR^4)_3 \qquad (2)$$

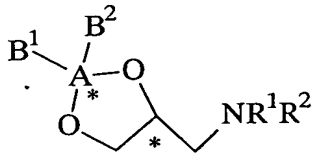
(wherein R^3 represents a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 10 carbon atoms, or a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, and R^4 represents an alkyl group having 1 to 6 carbon atoms),

$$SOY_2 \qquad (3)$$

(wherein Y represents a halogen atom or a lower alkoxy

group).

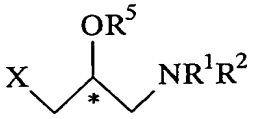
3. An optically active compound represented by formula (4):



(4)

[wherein * represents an asymmetric carbon atom or an asymmetric sulfur atom, A represents a carbon atom or a sulfur atom, B^1 represents R^3 (representing the same as the above), and B^2 represents OR^4 (wherein R^4 represents the same as the above) or B^1 and B^2 represent together an oxygen atom, and R^1 and R^2 represent the same as the above].

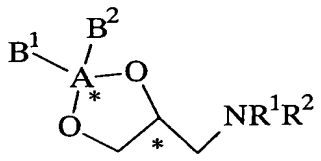
4. A process for preparing an optically active compound represented by formula (5):



(5)

[wherein * represents an asymmetric carbon atom, X represents a halogen atom, R^5 represents COR^3 (wherein R^3 represents the same as the above) or a hydrogen atom, and R^1

and R^2 represent the same as the above], the process comprising opening the ring of an optically active compound represented by formula (4):



(4)

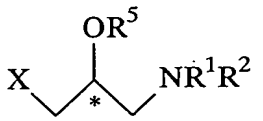
[wherein * represents an asymmetric carbon atom or an asymmetric sulfur atom, A represents a carbon atom or a sulfur atom, B^1 represents R^3 (representing the same as the above), and B^2 represents OR^4 (wherein R^4 represents the same as the above) or B^1 and B^2 represent together an oxygen atom, and R^1 and R^2 represent the same as the above].

5. A process for preparing an optically active 1-substituted amino-2,3-epoxypropane represented by formula (6):

(6)

(wherein * represents an asymmetric carbon atom, and R^1 and R^2 represent the same as the above], the process comprising preparing an optically active compound represented by

formula (5):



(5)

[wherein * represents an asymmetric carbon atom, X represents a halogen atom, R^5 represents COR^3 (wherein R^3 represents the same as the above) or a hydrogen atom, and R^1 and R^2 represent the same as the above], and then subjecting the compound to ring closure in the presence of a base.